InTeLeC 2020

Innovation in Teaching & Learning Competition

CULTIVATING & EMBRACING TEACHING & LEARNING INNOVATION

TEACHING AND LEARNING PRACTICES

ORGANISED BY

UNIVERSITI TEKNOLOGI MARA | Cawangan Perak

HITeL
HUB FOR INNOVATIVE TEACHING & LEARNING
UNIVERSITI TEKNOLOGI MARA CAWANGAN PERAK

eISBN:978-967-18031-1-0

PROCEEDINGS OF THE INNOVATION IN TEACHING & LEARNING COMPETITION (INTELEC2020)

PUBLISHED BY

Hub for Innovative Teaching and Learning (HITeL), UiTM Cawangan Perak

Website : https://hitelperak.wixsite.com/home

e-ISBN No : 978-967-18031-1-0

BE-CE EDUCATION GAMES: AN INTERACTIVE GAME-BASED LEARNING FOR CONSTRUCTION ECONOMICS COURSES IN BUILT ENVIRONMENT

***Afzan Ahmad Zaini[1], Balkhiz Ismail[2], Nurul Fahana Aini Harun[3], Nurzawani Md Sofwan[4]**

[1]Faculty of Built Environment,
Universiti Malaysia Sarawak,
Jalan Datuk Mohammad Musa, 94300 Kota Samarahan, Sarawak

[2]Department of Building, Faculty of Architecture, Planning and Surveying,
Universiti Teknologi MARA (UiTM), Sarawak Branch, Samarahan Campus,
94300 Kota Samarahan, Sarawak

[3]Faculty of Business and Management,
Universiti Teknologi MARA (UiTM), Johor Branch, Segamat Campus,
Jalan Universiti Off, KM 12, Jalan Muar, 85000 Segamat, Johor

[4]Department of Environmental Health, Faculty of Health Sciences,
Universiti Teknologi MARA (UiTM), Sarawak Branch, Samarahan Campus,
94300 Kota Samarahan, Sarawak

*Corresponding author's email: azafzan@unimas.my

Abstract

The chasm between modern science and the mundane reality of contemporary education requires a creative rethinking if inequalities and disparities are to be addressed meaningfully. To this end, game-based learning is often touted as having the uncanny ability in providing learners with a fun and interactive learning experience in which learning objectives are tenaciously respected, cultural similarities boldly embraced, and individual differences joyfully celebrated. Hence, by recognizing the palpable gap, it is vital to investigate the efficacy of game-based learning for two Construction Economics courses in Built Environment. The main objective of this project is to measure the impact of game-based learning on the students' performance in higher education. Hence, to achieve this objective, questions and rubrics were designed and prepared by following the course learning units. This project also required the participants to engage in a snake and ladder board game, to construct a creative model using Lego bricks, and finally to make a video presentation in a fun and interactive approach. Besides, outdoor activities were conducted with the intention to enhance the students' experience through a distinctive learning environment. Online tools, such as the ever-popular Padlet application, was deployed to garner students' feedbacks and reflections on this project. The data were subsequently analyzed to evaluate the students' level of understanding as well as to identify difficulties faced by students while learning the subject matter. Findings revealed that the majority of students understand the topics from their reflections and feedback. Consequently, results indicated that all students achieve the required Course Learning Outcome (CLOs) in the final examination. Notably, the CLOs achievement and students' feedback provided substantial evidence to suggest that game-based learning provides a fun and playful learning experience, which ultimately enhances the students' performance in higher education.

Keywords: Game-based Learning, Built Environment, Construction Economics, Student's Performance